

tus and the eye became straight again, especially when I at the same time removed a fold of conjunctiva from the internal angle, for the cicatrix that then followed tended to draw the globe inwards. If the eye, notwithstanding the division of the external rectus, still remained turned outwards, I then, after dividing and separating that muscle, tied a thread as fine as a hair upon its tendon, and with this pulled the eye forcibly inwards. The end of the thread was then drawn tightly across the bridge of the nose and fastened to a piece of good adhesive plaster, which was stuck upon the opposite side. The result for the most part surpassed my expectations.—*British and Foreign Med. Rev.*, October, 1840, from *Casper's Wochenschrift*, July 4, 1840.

57. *On the Cure of Strabismus.*—Dr. A. VON AMMON, in a memoir on this subject in the *Monatsschrift für Medicin, &c.*, June, 1840, very justly remarks, that a principal point is the determination of the indications for the operation; and I think it the more important, because the whole history of the affection, notwithstanding the works of many excellent physiologists, is extremely obscure and uncertain. Nor could this be otherwise when the anomalous position of the eye is in different cases so varied, and so often the consequence of diseased conditions of the brain, the abdominal nervous system, and of the globe itself. Here is a wide range for the production of the disease independently of the cases which are produced by diseases of the orbit. No rational physician will expect to cure such a strabismus by myotomy; and the operation can be applicable only when the malposition of the eye is primarily dependent on the muscle, *i. e.*, when there is a shortening of one of the muscles of the eye, which holds the eye to one side and limits its motions towards the other; but even here more than one condition must be laid down.

But unfortunately the necessary basis of the operation, pathological investigation, is at present absolutely and entirely deficient, no one has yet clearly convinced himself on the dead body that a shortened state of the muscle exists in squinting. The operation, however, may itself be made the means of investigating the nature of the disease; and here again, as has been the case with club-foot and wry-neck, surgery may be made the assistant of pathology.

With regard to the true orthopædics of the eye, *i. e.*, its acquiring the right position after the operation, this consists in the constant endeavour and active exertion of the patient, to give his eye the proper direction. A club-foot or a wry-neck would just as soon return to its right position after division of the tendons without assistance as a squinting eye will. A good method of insuring success is to tie up the sound eye; the eye that has been operated on then always moves to the centre of the orbit, and the longer it is kept there the more likely it is to remain. In few cases will this or some similar measure be unnecessary.

Dr. A. also suggests the propriety of endeavouring to make a subcutaneous or rather a subconjunctival division of the muscle, which he believes would avoid all the inconveniences to which the present method is subject. He has performed it on the dead subject and on animals; and has no doubt it may be applied to actual cases of strabismus.—*British and Foreign Med. Rev.*, October, 1840.

58. *The Causes and Treatment of Strabismus.*—*Summary of 76 Operations by Mr. Liston.* By W. R. ANCRAM.—The causes of contraction of the muscles of the orbit appear in several instances to be similar to those which produce shortening of other muscles of the body, and induce deformity in the extremities, as in club-foot, contraction of the ham-string muscles, &c., being dependent on direct or indirect injury or irritation of the nervous system. Under this head may be placed twenty-one of the cases which have been operated on; three being produced by direct injury to the brain, thirteen by the convulsions to which children are liable in early life, and nine by the irritation of the diseases of early childhood, small-pox, measles, and scarlatina. Habit is another rather frequent cause; the eye has been affected by some disease; in the anxiety to avoid the

light it has been turned inwards, and permanent strabismus has been the consequence; or a shade has been worn over the eye, the light has been admitted only at the inner angle, and to this point the eye has been constantly directed; ten patients date their deformity from this occurrence. Only four persons have presented themselves who suffered, from their attempts to imitate their squinting companions, by permanent strabismus. Violent exertion, as in whooping-cough, occasioned the disease in five patients; and the action of the muscles of the eye, in looking suddenly at some object, caused a permanent contraction in seven others. Four cases were occasioned by falls. The relative proportion of congenital strabismus is small. I have found only eight who say they were born with the deformity, and in four cases I think that was rather doubtful. From my inquiries into the causes of strabismus, I should say that a far greater number of cases was occasioned by spasmodic contraction of the internal rectus, than by paralysis of the external straight muscle. In a few cases I omitted to inquire the cause of the deformity.

The contraction of the recti muscles varies in different individuals, from the slightest cast, with perfect power of motion, to almost complete immobility and partial concealment of the cornea in the inner angle of the eye. The cornea is most generally drawn simply inwards; in some cases downwards as well as inwards, more rarely upwards and inwards; of course, by the combined action of two muscles. Two patients have also presented themselves where the eye was drawn directly outwards, evidently by a contraction of the external rectus. Both those individuals have been prevented by circumstances from submitting to the division of the abductor as yet; but it is proposed to perform the operation in the course of a few weeks. In a third case the external rectus has been divided, with the same success that attends the more common operation: it presented no greater difficulties than the division of the internal muscle. A most general effect of these changes is diminished power of sight, and this diminution increases in the ratio of the withdrawal and fixation of the cornea from the axis of vision.

The causes which produce strabismus being usually the diseases of early childhood, that is the age at which the affection most commonly comes on. In the greater number of cases the disease has begun previously to the third year, and after that time the liability to the affection appears to decrease with the age. After puberty it is exceedingly rare. Of the fifty-three cases I have examined, one only occurred at the age of fifteen, and one at twenty-five; in the latter case, the strabismus was occasioned by direct injury to the head. As far as I can judge, both sexes are equally liable to this deformity; forty females and thirty-six males having submitted to the operation. The disease does not appear to attack one eye in preference to the other, nearly an equal number of right and left eyes having been operated upon. One case has been treated where both eyes were affected. Age is no bar to the performance or success of the operation. Patients of all ages, from four to sixty-two, have been treated for this affection. A contracted internal rectus, of sixty years' standing, is the most confirmed case in which I have seen this operation performed, it succeeded perfectly. In very young children it would hardly be advisable to attempt the operation when the strabismus was only of few months' duration. The displacement of the eye might depend on some disease of the brain or intestinal canal, which, by attention to the general health, might be removed, and the squint cured without resort to the more violent remedy of division of the muscle.

With respect to the operation, the safest way to secure its complete performance, is to dissect, perfectly clean, the internal part of the ball of the eye, for the slightest fibre of the internal muscle that remains undivided will prevent eventual success. In some instances, after the internal rectus has been cut across, the patient possesses the power of turning the eye a little inwards and downwards; this arises from contraction of the inner border of the inferior rectus. Mr. Liston is in the habit of partially or completely dividing this muscle in all these cases, and this has been done in about ten instances. The only and best criterion of the completion of the operation, is the total inability of the patient

to move the cornea towards the inner canthus from the centre of the orbit. If this exist, there is little fear of any return of the distortion of the eye; and to effect this purpose, it will sometimes be absolutely necessary to divide the inner border of the inferior rectus. In four instances the operation has not been perfectly successful; these were all early cases, where, after the division of the internal muscle, the patient still possessed the power of moving the eye somewhat inwards, and before experience had shown the necessity of the division of the depressor. Three of these cases have submitted to a second operation; in all, the inferior rectus has been divided, and the cure is perfect. The fourth, a boy of thirteen years old, is fearful to submit to a second attempt; the eye is drawn downwards as well as inwards, caused, most probably, by contraction of the inferior rectus.

To insure the effect of the operation, the scissors and forceps certainly appear the most effectual instruments; and either for the clear dissection of the inner side of the eyeball, or for division of part of the inferior muscle, they are much to be preferred. By using these, the operator will avoid the danger of doing too little or too much; he will, on the one hand, make certain of cutting all the tendinous fibres which bind the eye in its unnatural position, and he will run no chance of wounding the sclerotic coat, and evacuating the humours of the eye, and thus effectually destroying vision. Ineffectual attempts to divide the internal rectus are common-enough occurrences; and cases have presented themselves where it has been necessary to resort to a second operation. The accident of destroying the organ has also happened, and is not unlikely to occur in the hands of those who go rashly and unskilfully to work.

Although such severe injury is done to the coverings of the eye, it is a rare circumstance to see any inflammation follow the operation. Only five cases have presented any such occurrence; and in all it was so slight, that the application of a few leeches to the inner angle of the eye soon relieved all the unfavourable symptoms.

A slight echymosis occurs under the conjunctiva, and may continue for some weeks, even after that membrane is entirely healed. In two or three cases a small abscess under the conjunctiva has formed, always of very little importance; it has discharged itself in a few days, and produced no inconvenience. A little caruncle, or large-sized granulation, sometimes springs from the conjunctiva, near the inner canthus; this may be snipped off if of large size, or its growth subdued by the application of sulphate of copper.

The restoration of the perfection of vision is one of the greatest recommendations of this beautiful little operation, and this effect has been most striking in several instances. In one very complete contraction of the internal rectus, the eye seemed to have been perfectly disused, and incapable of estimating the distance of objects. This patient, when he shut the perfect eye, presented many of the phenomena of a person restored to sight by the operation for congenital cataract; and it was most interesting to remark the daily improvement in his sight. As the two eyes begin to correspond, both in acuteness of vision as well as uniform motion, some diplopia is occasionally complained of.

The first operations which were performed by Mr. Liston, took place in the early part of May. I have had an opportunity of examining lately some of these cases, and I find that the eyes remain perfectly straight; there appears no reason, therefore, to expect that the other cases will not succeed; and this enables me to say, that out of seventy-four cases one only has been unsuccessful, and this in the person of the young boy above alluded to.—*Lancet*, July 18, 1840.

MIDWIFERY.

59. *On the oblique contraction of the Pelvis.*—Dr. NAGELE has lately called attention to a particular form of contraction of the pelvis which he says has never before been pointed out, and which, nevertheless, is of frequent occurrence; it